

Appl. No. 10/520,236
Amdt. Dated May 5, 2006
Reply to Office Action of February 10, 2006

Attorney Docket No. 81844.0032
Customer No.: 26021

REMARKS

This application has been carefully reviewed in light of the Office Action dated February 10, 2006. Claims 1-16 remain in this application. Claim 1 is the independent claim. It is believed that no new matter is involved in the arguments presented herein. Reconsideration of the rejections is respectfully requested.

Art-Based Rejections

Claims 1-4 were rejected under 35 U.S.C. § 103(a) over U.S. Patent No. 5,833,644 (Zadno-Azizi) in view of U.S. Patent No. 5,667,521 (Keown); Claims 5-8 were rejected under 35 U.S.C. § 103(a) over Zadno-Azizi in view of Keown and further view of U.S. Patent No. 5,308,342 (Sepetka); Claims 9-12 were rejected under 35 U.S.C. § 103(a) over Zadno-Azizi in view of Keown and further view of U.S. Patent No. 5,536,248 (Weaver); Claims 13-16 were rejected under 35 U.S.C. § 103(a) over Zadno-Azizi in view of Keown and further view of Sepetka and further view of Weaver.

Applicants respectfully traverse the rejections and submit that the claims herein are patentable in light of the arguments below.

The Keown Reference

Keown is directed to over the wire PTCA balloon catheters, and more particularly to a rapid exchange catheter with the guide wire lumen at the distal tip, wherein the exchange lumen is short. (*See Keown, Abstract; col. 4, line 65*)

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The Sepetka et al. Reference

Sepetka is directed to a catheter composed of an outer coaxial tube of relatively high flexibility and three tandemly disposed inner coaxial tube segments that vary in stiffness. (*See, Sepetka, Abstract*)

The Weaver et al. Reference

Weaver is directed to a method of electrosurgically obtaining access to the biliary tree of a patient and visualizing a duct thereof using a catheter having at least a first lumen and a second lumen. (*See, Weaver, Abstract*)

The Zadno-Azizi et al. Reference

Zadno-Azizi et al. is directed to a multi-catheter emboli containment system in which a treatment chamber within a blood vessel is formed by at least two occlusion balloons on opposite sides of a stenotic lesion, thereby preventing emboli migration during the treatment procedure. It goes on to disclose a catheter 280 comprising an elongated shaft 282 with a lumen 284 for aspiration. At the distal end 288 of elongated shaft 282, a separate inner catheter lumen 286 is positioned adjacent the main aspiration lumen 284. This inner catheter or guidewire lumen 286 can be as short as 5 cm, but can extend 30 cm or larger in proximal direction. (*See Zadno-Azizi, Abstract; col. 11, line 58 – col. 12, line 1; Fig. 14-15*)

The Claims are Patentable over the Cited References

The present application is generally directed to an aspiration catheter.

As defined by independent Claim 1, an aspiration catheter includes a main shaft with an aspiration lumen disposed therein. The aspiration lumen extends from the proximal end to the distal end of the main shaft. A guidewire shaft with a

guidewire lumen disposed therein. The guidewire lumen follows a guidewire. The guidewire shaft is positioned at the distal end of the main shaft. A hub is located at the proximal end of the main shaft. The tip of the main shaft is obliquely cut. The distal end of the guidewire shaft is positioned at the distal end of the main shaft or it protrudes from the distal end of the main shaft in the distal direction. The relationships $0.5 \leq L_2/L_1$ and $L_2 - L_1 \leq 5$ mm are satisfied, where L_1 is the length of the obliquely cut portion of the main shaft in the longitudinal direction of the catheter, and L_2 is the length from the proximal end of the guidewire shaft to the distal end of the main shaft.

The applied references, either alone or combined, do not disclose or suggest the above features of the present application as defined by independent claim 1. In particular the applied references do not disclose or suggest, "the relationships $0.5 \leq L_2/L_1$ and $L_2 - L_1 \leq 5$ mm are satisfied, wherein L_1 is the length of the obliquely cut portion of the main shaft in the longitudinal direction of the catheter, and L_2 is the length from the proximal end of the guidewire shaft to the distal end of the main shaft", as required by independent claim 1.

According to the present invention obliquely cutting the tip of the main shaft and attaching the guidewire lumen thereto can minimize an increase in the rigidity of the catheter shaft, due to the attachment of the guidewire lumen. However, when $L_2/L_1 < 0.5$ and the aspiration catheter is withdrawn, in a situation where another catheter is caught between the tip of the aspiration catheter and the guidewire, the guidewire lumen of the aspiration catheter easily breaks, which is dangerous. (*See, Applicants' Specification, pg. 9, lines 9 – 18*) Moreover, when $L_2 - L_1 > 5$ mm, the portion in which the guidewire lumen is attached to the main shaft is lengthened, and the rigidity of the catheter shaft increases greatly. Consequently,

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tractability of the aspiration catheter in tortuous blood vessels greatly decreases, which is undesirable. (*See, Applicants' Specification, pg. 9, lines 18 – 24*)

Zadno-Azizi fails to teach the relationships "...0.5 <= L2/L1 and L2 - L1 ≤ 5 mm...", as claimed in claim 1. Zadno-Azizi is silent regarding the length of the obliquely cut portion of the main shaft 282 and any advantages thereof. It is also silent as to whether figures 14 and 15 have been drawn to scale, and accordingly fails to teach or suggest a relationship between L1 and L2. As stated in MPEP § 2125, "When the reference does not disclose that the drawings are to scale and is silent as to dimensions, arguments based on measurement of the drawings features are of little value."

Accordingly, Zadno-Azizi fails to teach or suggest the above feature of the present invention as required by the claims of the present invention.

The ancillary references Keown, Sepetka and Weaver, fail to remedy the above deficiencies of Zadno-Azizi.

Since the applied references fail to disclose, teach or suggest the above features recited in independent claim 1, these references cannot be said to anticipate or render obvious the invention which is the subject matter of that claim.

Accordingly, independent claim 1 is believed to be in condition for allowance and such allowance is respectfully requested.

The remaining claims depend either directly or indirectly from independent Claim 1 and recite additional features of the invention which are neither disclosed nor fairly suggested by the applied references and are therefore also believed to be in condition for allowance and such allowance is requested.

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Conclusion

In view of the foregoing, it is respectfully submitted that the application is in condition for allowance. Reexamination and reconsideration of the application, as amended, are requested.

If for any reason the Examiner finds the application other than in condition for allowance, the Examiner is requested to call the undersigned attorney at the Los Angeles, California telephone number (213) 337-6809 to discuss the steps necessary for placing the application in condition for allowance.

If there are any fees due in connection with the filing of this response, please charge the fees to our Deposit Account No. 50-1314.

Respectfully submitted,
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